NexTier’s LateralScience method efficiently and effectively delivers information necessary to successfully engineer completions on every well. The technique leverages existing drilling data to derive mechanical specific energy (MSE) along the wellbore of any well, whether new or existing.

This enables the use of facies-based information to position perforation clusters so that they break down at a common treating pressure, which results in uniform fracture treatments within each stage. There is no data-acquisition cost, and the method doesn’t require additional rig time or equipment.

The LateralScience method enables operators to improve fracture stimulation effectiveness by optimizing placement of plugs and perforation clusters – as well as by providing visibility on rock hardness variation along the lateral. The results are used in a predictive manner to help build a treatment design that is most appropriate for the geomechanical properties of the reservoir rock being treated. In addition, by improving fracture efficiency, operators can reduce wasted proppant, minimize occurrence of screenouts/coiled tubing cleanouts, and maximize stimulated rock volume at every perforation cluster.

The LateralScience method beats geometric designs hands down:

- Targeted perforation cluster and plug placement
- Consistent stage/treating response
- Significant mitigation of offset frac hits
- Tailored treatment designs based on stage characteristics
- No data-acquisition cost or additional rig time
- Identification of potential refracturing candidates

**FIGURE 1**

More efficient clusters yield better production: As indicated on the left, the LateralScience method shows the dramatic heterogeneity in each wellbore and the differences between wells in the same field. As shown on the right, improving perf-cluster efficiency vastly improves production.
To increase perforation efficiency, stimulate more rock and boost production, contact us at NexTierOFS.com.

FIGURE 2

**Vast improvement over geometric completion designs:** The LateralScience method delivers an MSE log and an engineered perf-placement design. This design optimizes the completion by grouping perf clusters based on changes in rock hardness along the wellbore.

- Ability to evaluate wells using existing drilling data – No added Hz logs needed
- 650+ wells analyzed to date
- 4+ years of continued success integrating MSE drilling data
- 60+ clients, including major operators in most US basins
- Average incremental production increase of 19% over geometric completion designs